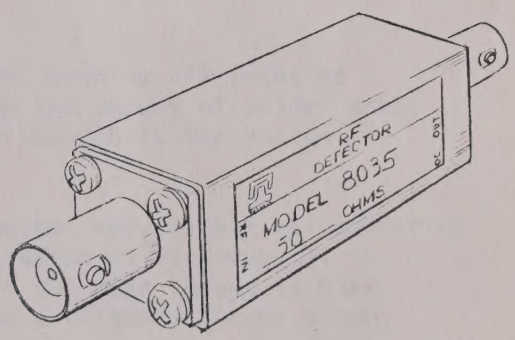
OPERATION
AND
SERVICE MANUAL
NO. 490307,8
490501

RF DETECTOR

MODELS 8034
8035
8036
8037
8038
8039



TelonicAltair
2825 Laguna Canyon Rd. · Box 277
Laguna Beach, California 92652
Tel: 714 494-9401 · TWX: 910 596-1320

RF DETECTORS

GENERAL:

The Telonic Series 803X was developed to provide a low cost RF Detector providing flat response over the RF and low end microwave frequencies. 50 or 75 ohm operation, positive or negative outputs, and peak detection or voltage doubling detection is provided.

MAINTENANCE:

The most common problem associated with the RF Detector is no or low output due to burnt detector diodes. It is also possible to damage the impedance determining resistor, R-1, by applying too much power to the input. This would result in poor flatness and high VSWR.

To repair the detector, the following procedure should be used:

(A) Remove the two top screws and loosen the two bottom screws on each connector.

(B) Remove the extrusion half with the detector label on it.

(C) This allows replacement of any components not installed on the PCB.

(D) If components installed on the PCB require replacement, remove the two bottom screws from the connectors and the screw holding the PCB to the bottom extrusion. Slide off the extrusion bottom.

(E) Use good RF soldering techniques, keeping all leads as short as possible and minimizing the amount of solder used. Replace the screw which secures the PCB to the bottom extrusion.

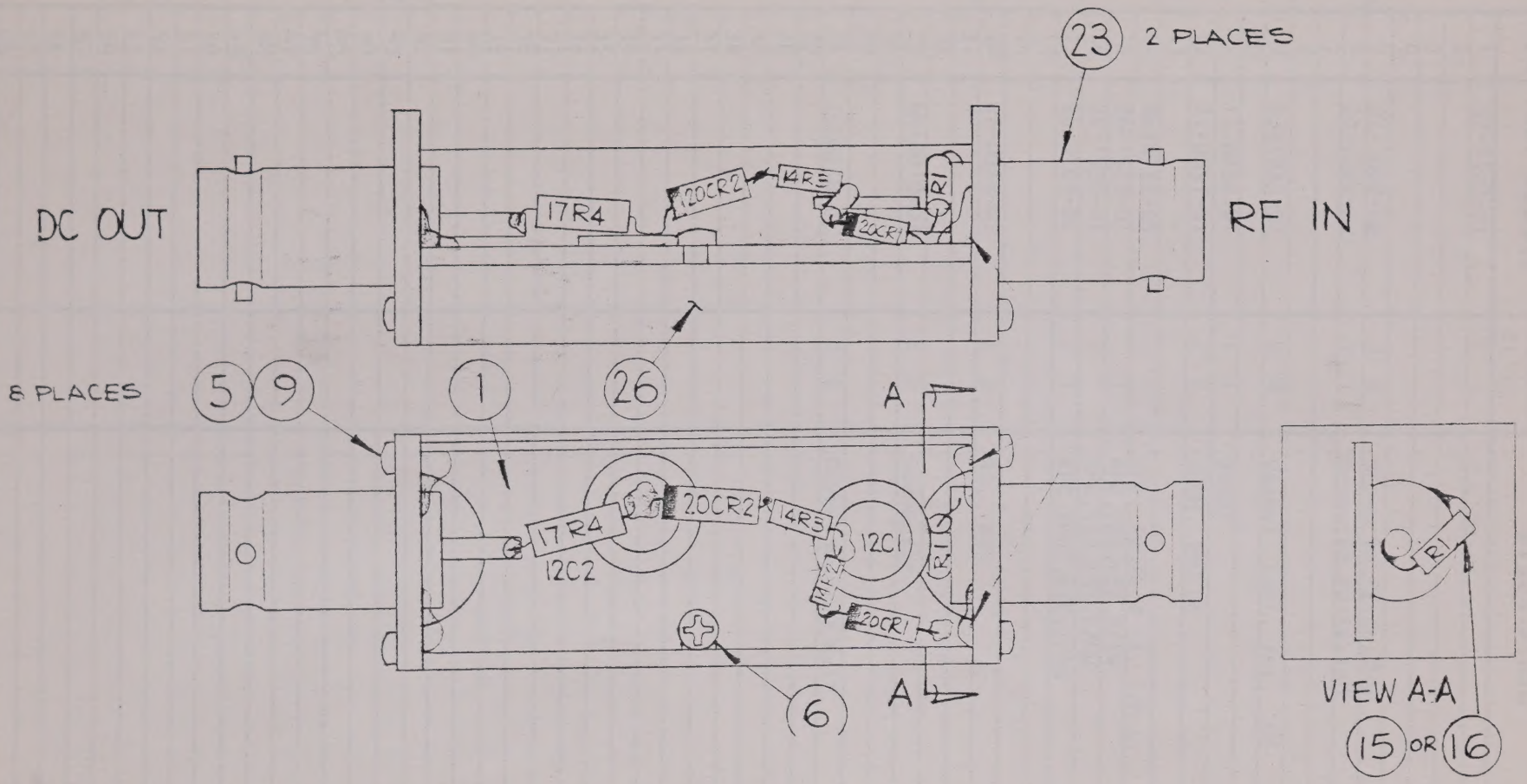
(F) Return the extrusion halves together and install all connector mounting screws. Since the extrusion is aluminum, it is possible to strip out threads if too much torque is used. If the threads are stripped, use a slightly longer screw.

RF DETECTORS

	Specifications					
	8034	8035	8036	8037	8038	8039
Frequency Range	1 MHz-2 GHz	.1 MHz-2 GHz	1 MHz-1 GHz	.1 MHz-1 GHz	30 KHz-300 MHz	30 KHz-300 MHz
Input Impedance	50 ohm	50 ohm	75 ohm	75 ohm	50 ohm	75 ohm
Flatness	± .5dB to 1 GHz ±.75dB to 2 GHz	± .5dB to 1 GHz ±.75dB to 2 GHz	±.5dB	±.5dB	±0.1 to 120 MHz ±0.5 to 300 MHz	±0.1 to 120 MHz ±0.5 to 300 MHz
Polarity	Positive P-P	Negative Peak	Positive P-P	Negative Peak	Negative Peak	Negative Peak
Max Voltage Input	3V	3V	3V	3V	5V	6V
Input Conn.	B N C J A C K					
Output Conn.	B N C J A C K					
Dimensions	1-3/4" x 3/4" x 3/4"					
Weight	2 oz.					

CAUTION: Transient or steady state overloads may result in damage to crystal diodes. The RF cable should match the detector input impedance.

-01	50Ω	8034
-02	75Ω	8036



DETECTOR, POSITIVE, P-P
Models 8034 & 8036

A95-0307-( )D

C=ECN 8675

ITEM	PART NUMBER	QTY 01	QTY 02	DESCRIPTION	CKT REF
1	57-0307-01	1	1	P.C.Board	
2					
3					
4					
5	02-7002-06	8	8	Screw,PH,#2-56x3/8	
6	02-7202-02	1	1	Screw,FH,#2-56x1/8	
7					
8					
9	03-1025-01	8	8	Washer, Lock, Int., #2	
10					
11	11-0282-01	1	1	Decal	
12	21-0051-01	2	2	CFCM, 150 pF	C1,2
13					
14	26-8112-05	2	2	RFC, 120Ω, ± 5%, 1/8 W	R2,3
15	26-1557-01		1	RFC,75Ω,±5%,1/4W	R1
16	26-1556-01	1		RFC,51Ω,±5%,1/4W	R1
17	26-0169-01	1	1	RFC,240Ω,±5%,1/4W	R4
18					
19					
20	41-0015-02	2	2	DS, IN82	CR1,2
21					
22					
23	44-0019-01	2	2	Connector	
24					
25					
26	15-0258-01	2	2	Cover,Housing,Half	
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					

APVD
ENG
CHK STEADMAN 5-24-72
BY
TRR NAME DATE 5/22/72

telonic™

PARTS LIST

TELONIC INDUSTRIES, INC.
21282 Laguna Canyon Road • Box 277
Laguna Beach, California 92652
Tel 714 494-9401 • TWX 910 596-1320

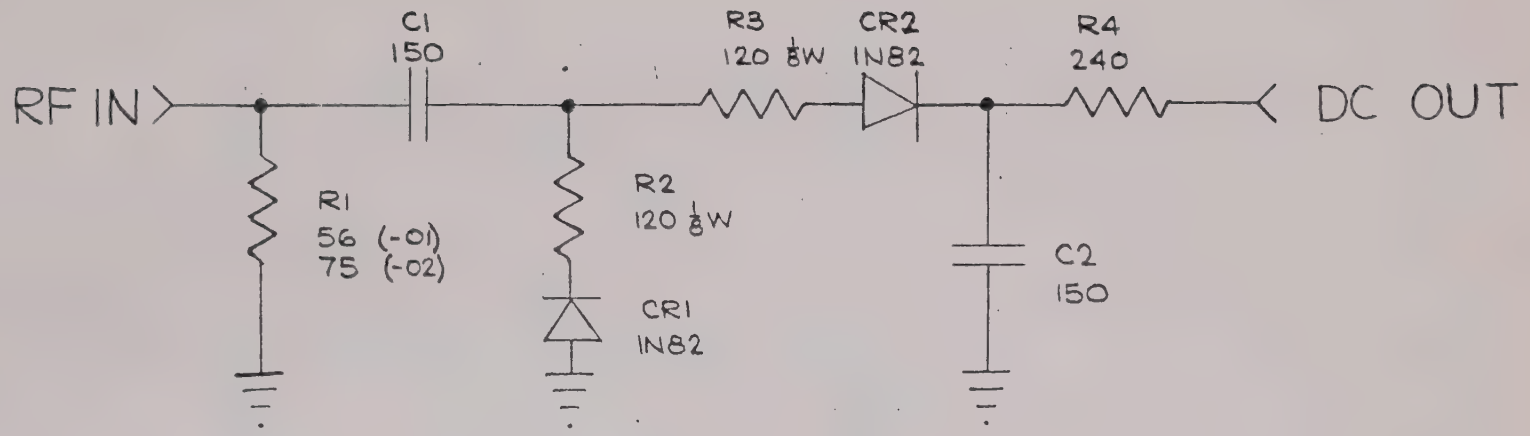
TITLE 8034 & 8036 PEAK TO PEAK DETECTOR (POS.)

REL
SH 3 OF 3
SIZE A
DWG NO 95-0307-( )
REV D

95-0307-( )

PHB3-81

-01	50Ω	8034
-02	75Ω	8036



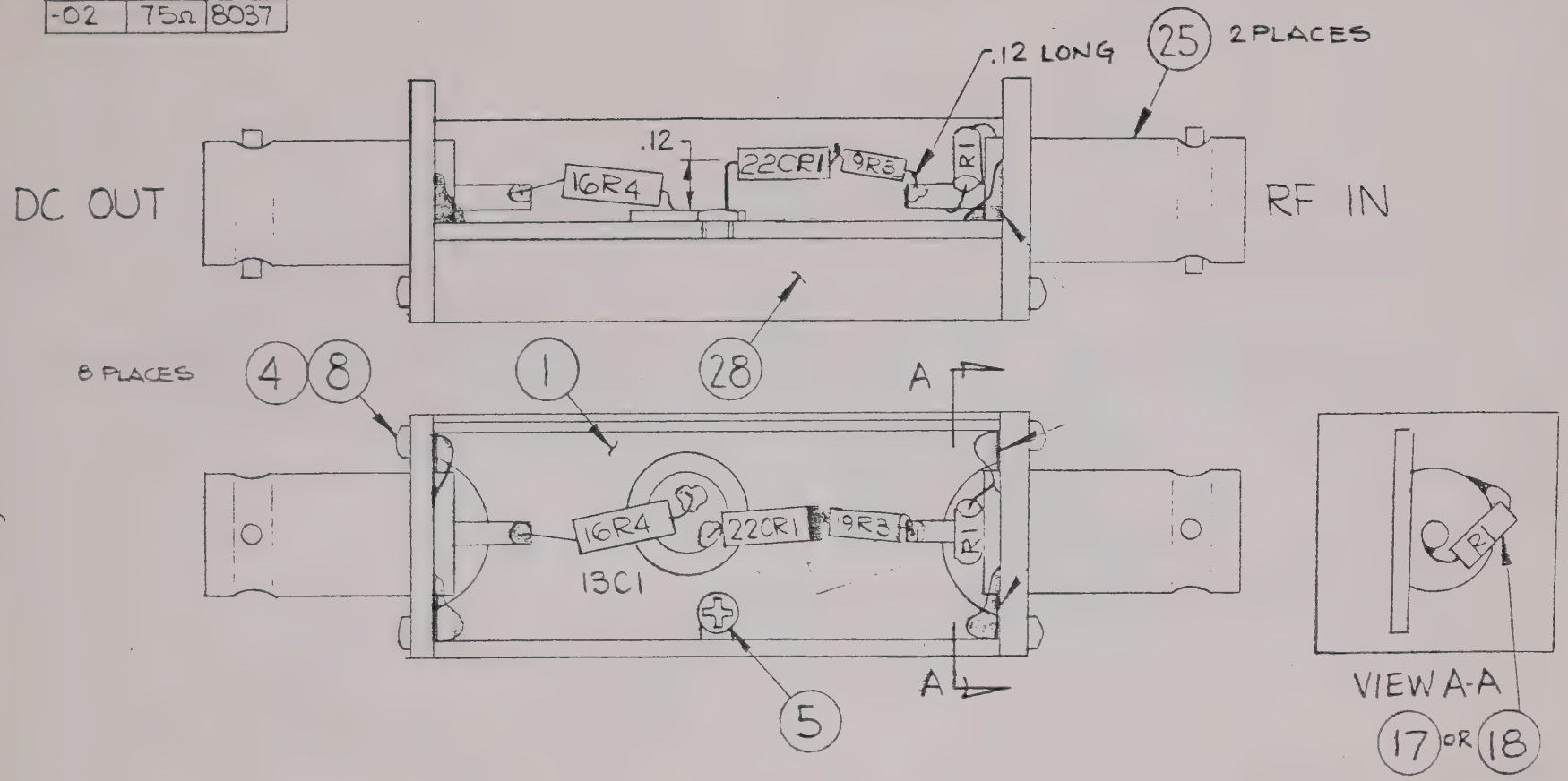
NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTORS 'AB' TYPE, 1/4W, 5%, CARBON.
2. CAPACITOR VALUES IN PICOFARADS.
3. FOR ASSY DRAWING SEE A95-0307-( )

SCHEMATIC - DETECTOR, POS., P-P
Models 8034 & 8036

A54-0307-( )

-01	50Ω	8035
-02	75Ω	8037



DETECTOR, NEGATIVE.
Models 8035 & 8037

A95-0308-( )F

A- ECN 6637
E = ECN 8675

ITEM	PART NUMBER	QTY 01	QTY 02	DESCRIPTION	CKT REF
1	57-0307-01	1	1	P.C. Board	
2					
3					
4	02-7002-06	8	8	Screw, PH, #2-56 x 3/8	
5	02-7202-02	1	1	Screw, FH, #2-56 x 1/8	
6					
7					
8	03-1025-01	8	8	Washer, Lock, Int., #2	
9					
10					
11	11-0282-01	1	1	Decal	
12					
13	21-0051-01	1	1	CFCM, 150pF	C1
14					
15					
16	26-0169-01	1	1	RFC, 240Ω, ±5%, 1/4W	R4
17	26-1557-01		1	RFC 75Ω, ±5%, 1/4W	R1
18	26-1556-01	1		RFC, 51Ω, ±5%, 1/4W	R1
19	26-8112-05	1	1	RFC, 120Ω, ±5%, 1/8W	R3
20					
21					
22	41-0015-02	1	1	DS, IN82	CRT
23					
24					
25	44-0019-01	2	2	Connector	
26					
27					
28	15-0258-01	2	2	Cover, Housing, Half	
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					

	NAME	DATE
BY	TPR	5/24/72
CHK	STEADMAN	5.25.72
ENG		
APVD		7/12/73

PARTS LIST

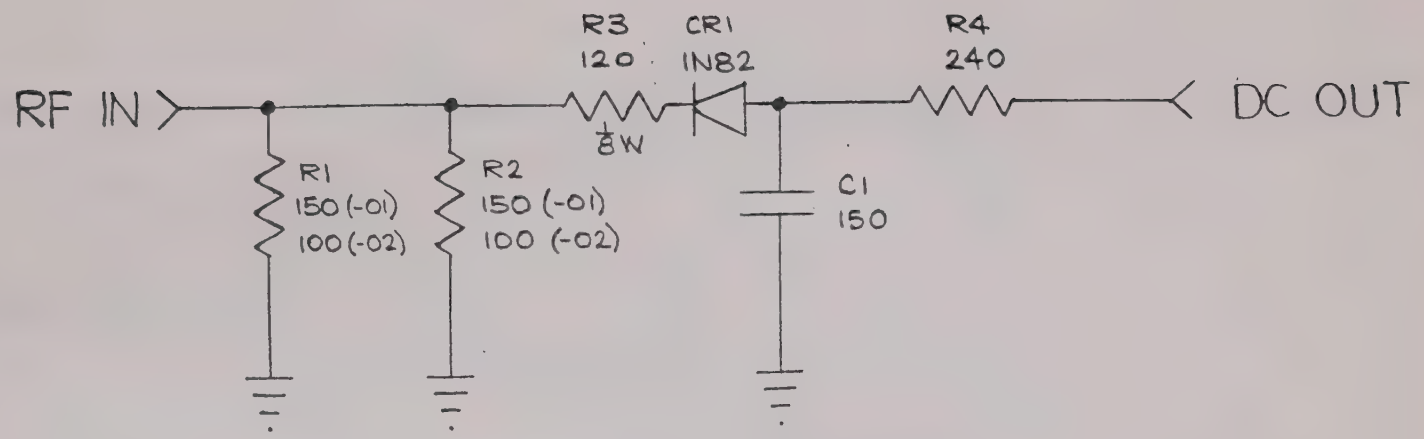
TELONIC INDUSTRIES, INC.
21282 Laguna Canyon Road • Box 277
Laguna Beach, California 92652
Tel 714 494-9401 • TWX 910 596-1320

TITLE: 8035 & 8037 PEAK DETECTOR (NEG)

REL	SH 3 OF 3
SIZE	DWG NO
A	95-0308- ( )
REV	F

95-0308- ( )

-01	50Ω	8035
-02	75Ω	8037



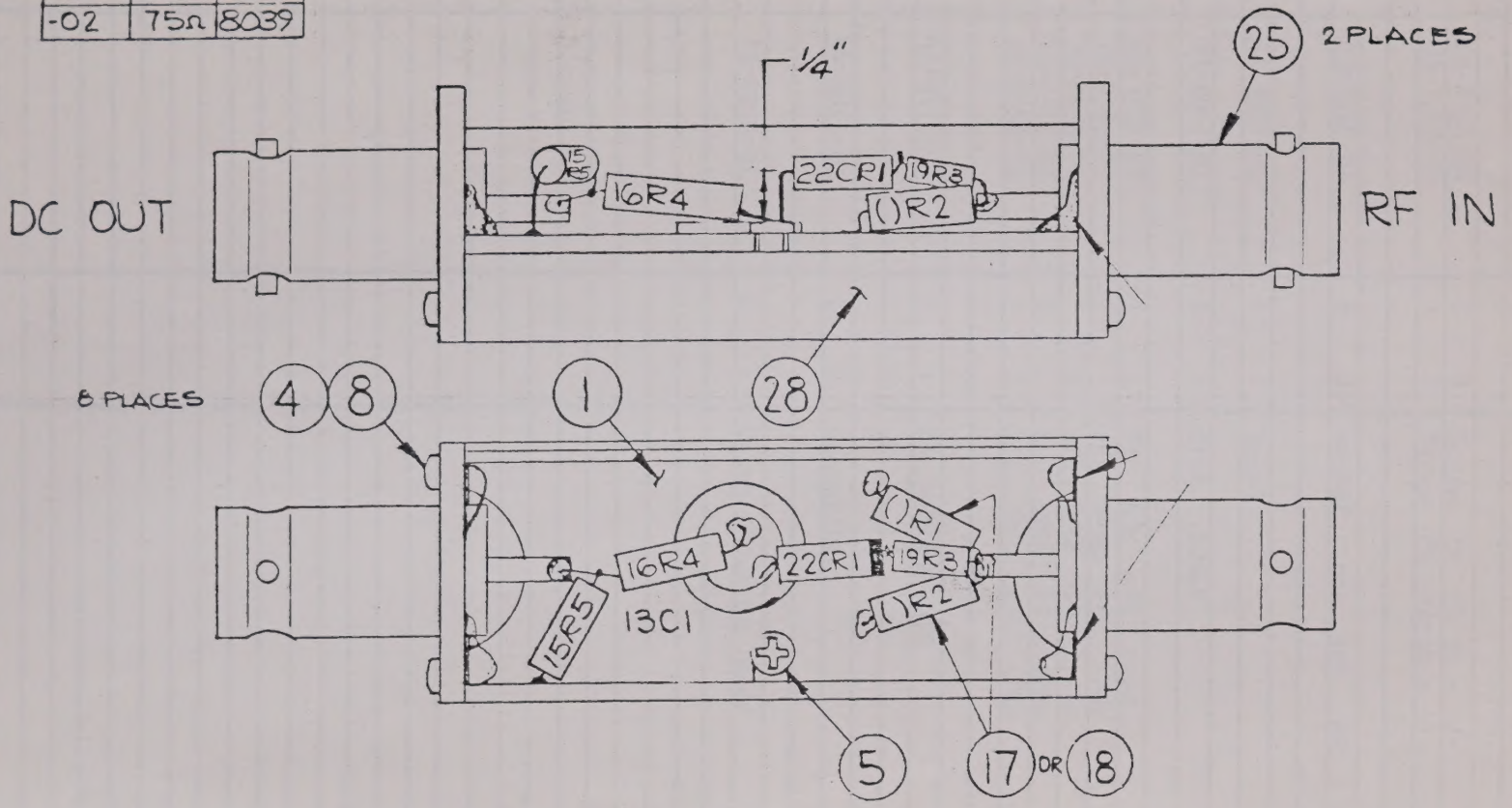
NOTES: UNLESS OTHERWISE SPECIFIED.

1. ALL RESISTORS TO BE 'AB' TYPE, 1/4 W, 5%, CARBON.
2. CAPACITOR VALUES IN PICOFARADS.
3. FOR ASS'Y DRAWING SEE A95-0308-( )

SCHEMATIC - DETECTOR, NEG., PEAK
Models 8035 & 8037

A54-0308-( )

-01	50Ω	8038
-02	75Ω	8039



DETECTOR, NEGATIVE
Models 8038 & 8039

A95-0501-( )A

ITEM	PART NUMBER	QTY 01	QTY 02	DESCRIPTION	CKT REF
1	57-0307-01	1	1	P.C. Board	
2					
3					
4	02-7002-04	8	8	Screw PH #2-56 x 1/4	
5	02-7202-02	1	1	Screw FH #2-56 x 1/8	
6					
7					
8	03-1025-01	8	8	Washer, Lock Int. #2	
9					
10					
11	11-0282-01	1	1	Decal	
12					
13	21-0041-01	1	1	CFCM .005μF	C1
14					
15	26-1507-01	1	1	RFC 47K ±5% 1/4W	R5
16	26-0169-01	1	1	RFC 240Ω ±5% 1/4W	R4
17	26-1575-01		2	RFC 150Ω ±5% 1/4W	R1,2
18	26-1558-01	2		RFC 100Ω ±5% 1/4W	R1,2
19	26-8056-05	1	1	RFC 56Ω ±5% 1/8W	R3
20					
21					
22	41-0111-01	1	1	DS HP5082-2800	CR1
23					
24					
25	44-0019-01	2	2	Connector	
26					
27					
28	15-0258-01	2	2	Cover Housing Half	
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					

APVD | ENG | CHK | BY | NAME | DATE

RLK 5/2/74

TPR 5/2/74

TELONIC INDUSTRIES, INC.
21282 Laguna Canyon Road • Box 277
Laguna Beach, California 92652
Tel: 714 494-9401 • TWX: 910 596-1320

PARTS LIST

TITLE 8038 & 8039 PEAK DETECTOR (NEG)

SH 3 OF 3 | REL

SIZE A | DWG NO 95-0501-( ) | REV A